

California's Experience in Training Public Health Physicians

By **GEORGE T. PALMER, Dr.P.H.,** and **MALCOLM H. MERRILL, M.D., M.P.H.**

IT IS a well-accepted principle today that people entering the field of public health should have specialized training. Sedgwick at the Massachusetts Institute of Technology, Vaughan at the University of Michigan, and Abbott at the University of Pennsylvania were pioneers in establishing teaching centers for this purpose as far back as 1890.

Sedgwick's early work was focused principally on the field of microbiology and sanitary science. At that time and, in fact, for many years thereafter, there was doubt in the minds of some as to whether the medically educated worker really needed additional training in public health practice. Gradually, however, it became evident that the scope of a medical health officer's work went well beyond the field of medicine. Knowledge was also required in the fields of engineering, environmental sanitation, vector control, health education, social problems, community leadership, public administration, and laboratory sciences as related to public health as well as other fields.

In order to meet the growing need, schools of public health grew in number and in the scope of instruction offered. Through the years it has become increasingly evident that so far as medical health officers' training is concerned the limiting factor has been the provision of candidates for training. Recruiting of physicians

was materially facilitated, though not solved, with the provision of Federal funds for scholarships. These funds became available in California in 1936. The following report summarizes the experience in the training of physicians in California since that time.

Background of Study

During the period from September 1936 through June 1954, 86 physicians were granted scholarships by the California State Department of Public Health for the 8 or 9 months' course in a school of public health leading to the degree of master of public health. In a very few instances, field training in a local health department was provided for an extra period of 3 months. And in a few instances the scholarship was granted after the beginning of the term and thus did not cover the full period of 9 months.

Training was carried on for the 6 years 1936 through 1941, and then was discontinued during the war years of 1942 through 1945 because of lack of candidates. The scholarship program was renewed in 1946 and has continued without interruption to date. However, no candidates were available for the academic year 1952-53. Thus, this review represents 13 training years.

Omitted from the tabulations that follow are 12 physicians, the 6 who completed training in June 1955 and another 6 who concluded training in June 1956. All of these were promptly placed in local health departments in California.

Dr. Palmer is consultant in public health training and administration and Dr. Merrill is director of the California State Department of Public Health.

Table 1. Years served in public health or related field by physicians whose training was sponsored by the California State Department of Public Health, September 1936–June 1954

Number of trainees, field, and length of service	In California June 1954	Have been in California but not present June 1954	Never in California	Total	Percentage distribution of total possible years of service less death years
Number of trainees.....	49	34	3	86	-----
Government service years:					
In California.....	432	174	0	606	68
Other States.....	3	31	25	59	7
Foreign service.....	6	8	5	19	2
Military service.....	20	36	0	56	6
Total government service.....	461	249	30	740	83
Nongovernment service years:					
Private practice.....	4	126	0	130	15
Other fields.....	1	18	0	19	2
Length of service:					
Maximum possible service years.....	466	434	30	930	-----
Years lost through death.....	0	41	0	41	-----
Maximum possible years less death years.....	466	393	30	889	-----
Maximum length of service in California per trainee.....	18	15	-----	-----	-----
Minimum length of service in California per trainee.....	1	1	-----	-----	-----
Average years per trainee:					
In California.....	8.8	5.1	-----	-----	-----
In total government service.....	9.4	7.3	10.0	8.6	-----

The gathering of the basic data has been difficult and time consuming owing to the inadequacy of complete detailed records for the period prior to 1947. We drew on the knowledge of workers long with the State health department and made extensive inquiries of trainees through correspondence. However, accuracy in all particulars cannot be assured. In assembling costs of scholarships, we used the amount prevailing at the particular period when the specific individual amounts were not definitely at hand. The figures used, we believe, are a fair estimate.

Services After Training

A study was made of the subsequent history of employment of the 86 physicians who received training under the program. Special attention was given to determining the number of years after training that each physician continued in full-time public health work, both in California and elsewhere (table 1).

Still in public health or related public health services in California are 49 of the 86 trainees. The term "related" refers to employment other than in health departments, such as teaching

in schools of public health or universities or work in various voluntary health agencies or public health associations.

Since receiving training, some of the 49 physicians who were engaged in public health work in California in 1954 have been in health service for one or more years in other areas of the country or in foreign or military service or in private practice.

All but 3 of the 86 have at some time since training spent one or more years in public health or related service in California. There has been an understanding between the scholarship recipient and the State health department that upon completion of training the trainee would accept a position in a California health department and remain in this type of employment for a minimum period of 2 years. The three who have not done so have given justifiable reasons, such as unexpected family circumstances, illness, or compelling calls to foreign service. In one of these instances, the entire amount of the scholarship was repaid to the State.

In addition to the 49 employed in California in 1954 and the 3 mentioned above, 34 trainees who were employed elsewhere in 1954 or who

had died (4 in number) had previously spent a total of 174 years in California service.

Altogether, the 86 trainees have spent 606 years in health service in California, 59 years in health service in other areas of the country, 19 years in foreign service, 56 years in military service, 130 years in private practice, and 19 years in other fields of work.

The total possible years of service (18 years per person for those finishing their training in 1937, 17 years for those finishing in 1938, and so on) is 930. However, 41 years must be deducted for years lost through premature death, thus converting this figure to 889 years.

The 606 service years spent in public health or work related to public health in California represent 68 percent of the 889 possible years. However, if to the 606 years are added the service in other States, foreign, and military service, 740, or 83 percent, of the possible 889 years were spent in government service.

Of the 15 percent of total possible years spent in private practice, it may be said that, although not spent in strictly public health service, undoubtedly there were substantial and worthwhile gains in an understanding cooperation with public health services stemming from the active years spent in this field.

Of the 18 trainees in private practice in 1954, 16 received their public health training prior to 1942. Only two trainees in the training period from 1946 on were in private practice in 1954.

Cost of Training

The average cost of a scholarship for the 86 physicians during the 13 years of the program

was \$2,910 per person (table 2). Excluded from this sum are operating and administrative costs. The largest item was for stipends, or living expenses, which amounted to about \$222,700. The approximate total for tuition was \$17,300 and for travel, \$10,000. The total is thus about \$250,000. For this sum, the taxpayers have already received 740 man-years of professional medical public health service. This length of service represents an average cost per trainee of approximately \$338 per year thus far. The figure will decrease, of course, as the years of service increase.

The financial support of the training program for physicians, as well as for other professional personnel not here indicated, has come from Federal funds throughout the entire period with the addition of State funds for the 2 years 1948-49 and 1949-50.

The cost of scholarships have varied considerably over the years. This has been due to a number of changing circumstances, including changes in amount of scholarship allowance reflecting economic changes; the location of the training school, with higher travel and tuition costs for eastern schools; and the change in policies in later years whereby costs in eastern schools were limited to the equivalent of the California school.

The 86 physicians received their training in 8 universities as follows:

California	46	Michigan	4
Harvard	17	Minnesota	2
Johns Hopkins	10	Columbia	1
Yale	5	Vanderbilt	1

It is of interest to note the wide participation of schools of public health throughout the coun-

Table 2. Scholarship costs for physician training in public health

School years	Number in group attending school			Approximate average cost per trainee ¹			
	In California	Outside of California	Total	Stipend	Tuition	Travel	Total
1936-38	21	0	21	\$1, 770	\$55	0	\$1, 825
1939-41	1	26	27	1, 860	330	\$230	2, 420
1946-50	18	13	31	3, 630	215	125	3, 970
1951-53	6	1	7	3, 230	65	5	3, 300
Total	46	40	86				

¹ Average for entire group, \$2,910.

try in contributing to the education of California scholarship students.

Discussion

It is believed that the money invested by government in the training of public health physicians in California has been a most valuable investment. While only 68 percent of the 889 possible years of service were spent in public health in California, it is significant that 83 percent of the possible years were spent in government service, either within or outside continental United States. Since the funds were derived primarily from a national source, it is not unreasonable to include service in the general public health field as representing returns on the investment. Taking this into consideration, the average cost to government per year of service of the medical officers covered in this study has been approximately \$338 for the 740 man-years to date. When it is considered that in the California public health situation physicians thus trained are for the most part responsible for the administration of State and local public health programs involving the expenditure, at present, of between \$40 and \$50 million annually, the true significance of the government's investment in training is apparent.

Most of the physicians leaving the public health field were trained prior to 1946. This loss occurred during the unsettled conditions of World War II with the resulting intensification of competitive bidding for the services of these physicians. Since the 1946 period, there has been a distinct change in the status of the public health profession, the development of the Specialty Certification Board in Preventive Medicine, and more attention on the part of the public to provision of better salaries for career public health physicians. The stabilization of public activities has contributed to making a career in public health more attractive as a continuing profession for physicians once they are recruited into the field.

Recruitment, however, is still a difficult problem. The limited number of available scholarships is a vital restriction. In California, for example, with due regard for the training of other professional personnel, there are but six

scholarships per year currently available for physicians. It is estimated that at least 10 physicians will need to be trained annually in order to take care of replacements and expanding public health activities in the State.

It is becoming increasingly evident that the only way sufficient physicians can be recruited to the public health profession will be through the provision of a planned program of training that will carry them through the academic year of postgraduate education in public health plus 1 year of residency in an approved health department. With this background they will find employment opportunities that will add 1 year of supervised field experience in public health and 3 years of public health practice. After completing these 6 years of training and experience in preventive medicine and public health, physicians will be eligible for certification by the American Board of Preventive Medicine.

Summary

1. Since 1936, 86 physicians have been granted scholarships by the California State Department of Public Health for academic training in public health.
2. Of these 86 physicians, 49 are still engaged in full-time public health or related public health work in California, and 34 others have been at some time in public health work or related service in California.
3. Of the 889 possible years since completing training, the 86 trainees have devoted 740 man-years, or 83 percent, of the possible years in government service; 606 of these service years have been spent in public health or related work in California.
4. The total cost for training the 86 physicians has been \$250,000. If spread over the subsequent years of service in the public health field until June 1954, this amount represents a cost of approximately \$338 per year of service.
5. Eight different schools of public health were utilized in the training of these candidates.
6. It is concluded that this has been a sound investment on the part of government.
7. The need for further extension of this type of training program is indicated.